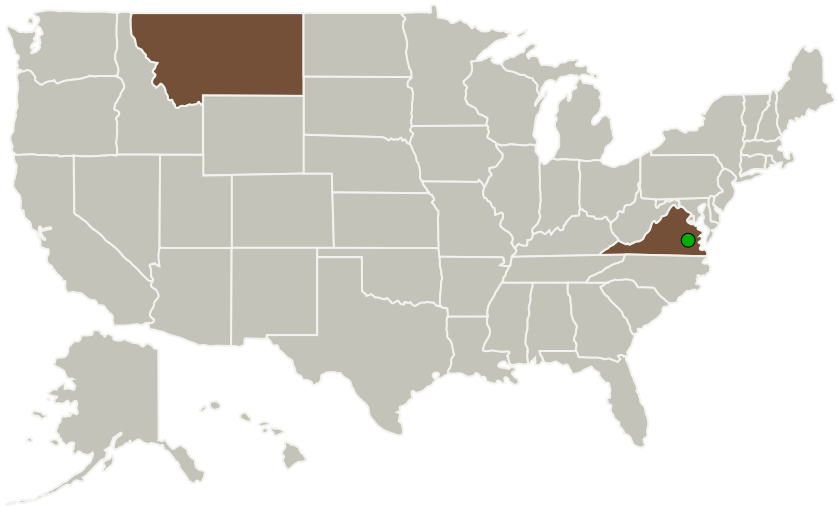
Integrated Planar Lightwave Circuits for UV Generation and Phase Modulation, Phase II

Completed Technology Project (2011 - 2013)

Project Introduction

The primary goal of this SBIR effort is delivery of a compact, robust, highly efficient, fiber-coupled UV module to provide the required 355nm light for integration into HSRL's UV interferometric-based measurement system. An additional goal of this effort is to prototype a compact, robust, fiber-coupled UV PLC module which produces the required spectrally formatted 355nm light for stabilization of the HSRL's UV interferometric filter, a component required for the accurate measurement of critical aerosol microphysical properties. This approach is enabled by AdvR's patented submount poling technique together with AdvR's integrated Planar Lightwave Circuit (PLC) technology. The UV PLC concept advances NASA's state-of-the-art lidar systems due to its compact, efficient, and reliable design, thus enabling use on small aircraft and future space-based platforms.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
ADVR, Inc.	Lead Organization	Industry	Bozeman, Montana
Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

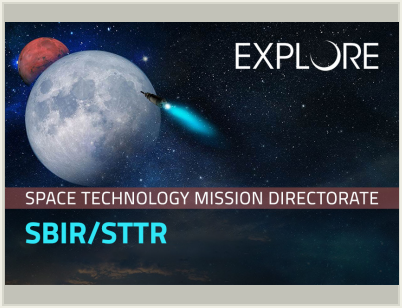


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Table of Contents

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Primary U.S. Work Locations	
Montana	Virginia

Project Transitions

June 2011: Project Start

May 2013: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/139009)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

ADVR, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Shirley Mcneil

Co-Investigator:

Shirley Mcneil

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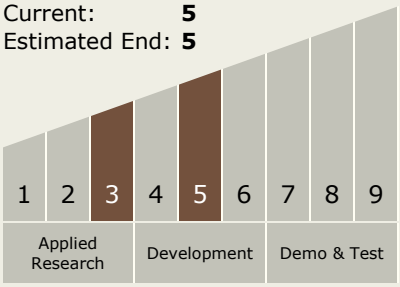
Technology Maturity (TRL)

Start: **3**
Current: **5**
Estimated End: **5**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.3 Optical Components

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System